IN THE CLAIMS:

Please amend claims 64 and 76 as follows:

1-40. (Canceled)

41. (Previously presented) An enhanced VSB transmitter for transmitting main data and supplemental data comprising:

a pre-RS (Reed-Solomon) encoder for pre-encoding the supplemental data by using a first code;

a first multiplexer for multiplexing the main data and the pre-RS encoded supplemental data;

a main RS encoder for encoding the multiplexed data by using a second code; and

a data format converter for formatting the multiplexed data encoded by the main RS encoder for transmission and transmitting the formatted data to one or more VSB receivers.

42. (Previously presented) The enhanced VSB transmitter of claim 41, wherein the first code comprises a block size N1, a payload K1, and an error correction capability T1.

43. (Previously presented) The enhanced VSB transmitter of claim 42, wherein the second code comprises a block size N2, a payload K2, and an error correction capability T2.

44. (Previously presented) The enhanced VSB transmitter of claim 43, wherein the N1, K1, and T1 of the first code and the N2, K2, and T2 of the second code are equal.

45. (Previously presented) The enhanced VSB transmitter of claim 43, wherein the N1, K1, and T1 of the first code and the N2, K2, and T2 of the second code are different.

46. (Previously presented) The enhanced VSB transmitter of claim 41, wherein the supplemental data comprises X bytes and the pre-RS encoder provides Y parity bytes, wherein a total of X and Y bytes is 184 bytes.

47. (Previously presented) The enhanced VSB transmitter of claim 41, further comprising:

an interleaver for interleaving the pre-RS encoded supplemental data;

a null data inserter for inserting a plurality of null bits into the interleaved supplemental data, and

a header inserter for inserting a header into the supplemental data having the plurality of null bits.

48. (Previously presented) The enhanced VSB transmitter of claim 47, wherein the null data inserter inserts the plurality of null bits into each interleaved supplemental data in a predetermined order.

49. (Previously presented) The enhanced VSB transmitter of claim 47, wherein the plurality of null bits are arranged at alternating positions within each interleaved supplemental data.

50. (Previously presented) The enhanced VSB transmitter of claim 47, wherein the plurality of null bits are "0".

51. (Previously presented) The enhanced VSB transmitter of claim 47, wherein the header inserter adds three bytes of header information to the supplemental data having the plurality of null bits, wherein the header information contains program identification.

52. (Previously presented) The enhanced VSB transmitter of claim 41, wherein the first multiplexer multiplexes the main data and the supplemental data according to a predetermined multiplexing information.

53. (Previously presented) The enhanced VSB transmitter of claim 52, wherein the predetermined multiplexing information is inserted in a reserved area of a field synchronizing signal or a data segment of the supplemental data.

54. (Previously presented) The enhanced VSB transmitter of claim 52, wherein the predetermined multiplexing information comprises at least one of a multiplexing ratio and unit.

55. (Previously presented) The enhanced VSB transmitter of claim 54, wherein the multiplexing unit and the multiplexing ratio are predetermined based on amounts of the main data and the supplemental data.

56. (Previously presented) The enhanced VSB transmitter of claim 54, wherein the multiplexing ratio of the supplemental data to the main data in the first multiplexer is one to one.

57. (Previously presented) The enhanced VSB transmitter of claim 54, wherein the multiplexing ratio of the supplemental data and the main data in the first multiplexer is one to three.

58. (Previously presented) The enhanced VSB transmitter of claim 41, wherein the first multiplexer is responsive to a field synchronizing signal used for synchronizing a data frame of the data format converter.

59. (Previously presented) The enhanced VSB transmitter of claim 41, wherein one field of the multiplexed data has 312 data segments and one field synchronizing segment.

60. (Previously presented) The enhanced VSB transmitter of claim 41, wherein the main data is MPEG data.

61. (Previously presented) The enhanced VSB transmitter of claim 41, further comprising a data randomizer for randomizing the multiplexed data.

62. (Previously presented) The enhanced VSB transmitter of claim 41, further comprising:

a data interleaver for interleaving the multiplexed data encoded by the main RS encoder; and

a Trellis coder for converting the interleaved data into symbols.

63. (Previously presented) The enhanced VSB transmitter of claim 41, wherein the data format converter comprises:

a second multiplexer for multiplexing the multiplexed data encoded by the main RS encoder with a field synchronizing signal and segment synchronizing signals;

a pilot inserter for inserting pilot signals into the data multiplexed by the second multiplexer;

a modulator for modulating the symbol data having the pilot signals into a signal of an intermediate frequency band; and

a RF (Radio Frequency) converter for converting the modulated signal into a RF band signal for transmission.

64. (Currently amended) A method of transmitting main data and supplemental data in a VSB transmitter, the method comprising:

pre-RS (Reed-Solomon) encoding the supplemental data in the VSB transmitter by using a first code;

multiplexing main data and the pre-RS encoded supplemental data in the VSB transmitter;

RS encoding the multiplexed data in the VSB transmitter by using a second code;

formatting the RS encoded multiplexed data for transmission in the VSB transmitter; and

transmitting the formatted data from the VSB transmitter to one or more VSB receivers.

65. (Previously presented) The method of claim 64, wherein the first code comprises a block size N1, a payload K1, and an error correction capability T1.

66. (Previously presented) The method of claim 65, wherein the second code comprises a block size N2, a payload K2, and an error correction capability T2.

67. (Previously presented) The method of claim 66, wherein the N1, K1, and T1 of the first code and the N2, K2, and T2 of the second code are equal.

68. (Previously presented) The method of claim 66, wherein the N1, K1, and T1 of the first code and the N2, K2, and T2 of the second code are different.

69. (Previously presented) The method of claim 64, wherein Reed-Solomon parity bytes are added to the pre-RS encoded supplemental data.

70. (Previously presented) The method of claim 69, wherein the added Reed-Solomon parity bytes vary with an amount of the supplemental data.

71. (Previously presented) The method of claim 70, further comprising:

interleaving the pre-RS encoded supplemental data.

expanding the interleaved supplemental data by inserting null data into the interleaved supplemental data; and

adding headers to the expanded supplemental data.

72. (Previously presented) The method of claim 71, wherein the null data is arranged at alternating positions within the interleaved supplemental data.

73. (Previously presented) The method of claim 71, wherein each header comprises an identification code identifying the expanded supplemental data.

74. (Previously presented) The method of claim 64, further comprising:
randomizing the multiplexed data; and
outputting the randomized data for main RS encoding the randomized data.

75. (Previously presented) The method of claim 64, further comprising:
interleaving the RS encoded multiplexed data; and
converting the interleaved data into symbols.

76. (Currently amended) A method of processing a digital television (DTV) signal in a DTV receiver, the method comprising:

receiving a DTV signal in the DTV receiver, the DTV signal including a data frame, the data frame including normal data and robust data multiplexed with the normal data, wherein the normal data results from performing an interleaving operation once and the robust data results from pre-processing original robust data before multiplexing with the normal data, coding the pre-processed robust data for second FEC, and interleaving the robust data coded for second FEC, wherein pre-processing the original robust data before multiplexing with the normal data comprises coding the original robust data for first forward error correction (FEC), interleaving the FEC-coded robust data and periodically inserting predefined sequences into the interleaved robust data; and

performing channel equalization in the DTV receiver on the robust data in the data frame using the predefined sequences in order to enhance ghost cancellation performance of the robust data.

77. (Previously presented) The method of claim 76, wherein the normal data comprises MPEG data.

78. (Canceled)

79. (Previously presented) The method of claim 76, wherein the normal data and the robust data are multiplexed in the data frame at a multiplexing ratio of 1:N.